

KORABLEV, Yu.N.

Effectiveness of crossing various cabbage specimens of the "Number One" variety. Agrobiologiya no.4:537-543 J1-Ag '64.

(MIRA 17:12)

1. Gribovskaya ovoshchnaya selektsionnaya opytnaya stantsiya, Moskovskaya oblast'.

GRINBERG, A.A.; KORABLEVA, A.A.

Kinetics of aquation of the isomeric $[Pt(NH_3)_2Cl_4]$ salts.
Zhur. neorg. khim. 9 no.10:2313-2318 0 '64.

(MIRA 17:12)

BOKSHEYN, S.Z. (Moskva); KISHKIN, S.T. (Moskva); LOZINSKIY, M.G. (Moskva);
SOKOLKOV, Ye.N. (Moskva); Primali uchastiye: PODVOYSKAYA, O.N.;
ZILOVA, T.K.; SOROKINA, K.P.; POLYAK, E.V.; MOROZ, L.M.;
BULYGIN, I.P.; LASHKO, N.F.; POKAMESTOVA, T.N.; GORDEYEVA, T.A.;
YAGLOV, R.V.; VOLODINA, T.A.; KORABLEVA, G.N.; ANTIPOVA, Ye.I.

Thermomechanical treatment of chromium-nickel-manganese
austenitic steel. Izv. AN SSSR. Otd. tekhn. nauk. Met. i topl.
no.2:15-21 Mr-Ap '62. (MIRA 15:4)
(Chromium-nickel steel--Hardening)

ARISTOVA, N.A.; GERCHIKOVA, N.S.; KOLOBNEV, I.F.; KORABLEVA, G.N.

Electron microscopy of alloys in the system Al - Cu,
Al - Cu - Mn, Al - Cu - Mn - Ni. Alium. splavy no.1:50-54 '63.
(MIRA 16:11)

KORABLEVA, L. A.

TRASH 1 BOX EXPLANATION 507/981
Sovetskaya po teorii veroyatnostey i matematicheskoy statistike, Yerevan, 1958
Trudy Vsesoyuznogo s'ezhda matematikov i matematicheskoy statistiki, Yerevan, 19-25 sentyabrya 1958 g. (All-Union Conference on the Theory of Probability and Mathematical Statistics. Held in Yerevan 19-25 September, 1958. Translations) Yerevan, Izdat. AN ANSSR, 1960. 591 p. Brutto ally inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk Armianskoy SSR.

Editorial Staff: G.A. Akhartsyan, S.V. Gerasimov, Ya.B. Dyukin, Yu.Ye. Linnik and S. Kh. Yemayev; Ed. of Publishing House: A.G. Shpani; Tech. Edt. M.A. Kopyayeva.

NOTES: The book is intended for mathematicians.

CONTENTS: The book contains 11 articles submitted to the Conference and dealing with the theory of probability and mathematical statistics. Some of the articles are the papers read at the Conference and edited for publication, while others outline the theses of papers which appeared or are scheduled to appear, wholly or in part, in other publications; in some cases, such publications are quoted. A list of the papers whose theses were published elsewhere is included and the place of publication is indicated. Individual articles examine theories of mass service, spectral instruments, numbers, games, and certain functions, and discuss the theorems of Shannon, Markov's chains, and certain processes, stochastic, and diffusions. Such items as the method of least squares, scheme of Bernoulli experiments, Markov-type random fields, relative distinction of stars, Brownian motion, capacity of radio channels, and defective products are considered. No personalities are mentioned. References accompany some of the articles.

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| Shanigapich, V.A. Limit Theorems for Heterogeneous Markov's Chains (Theses) | |
| Yach'yer, B.S. Modern State of the Theory of Games and Cooperative Games. (Theses) | 40 |
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KORABLEVA, L.I. Cand. Agricult. Sci.

Dissertation: "Influence of the Prolonged Action of Lime on Agrochemical Properties of Podzolic Soils." Soil Inst imeni V.V. Dokuchayev, Acad Sci USSR, 5 Feb 47.

SO: Vechernyaya Moskva, Feb, 1947 (Project #17836)

CA

The influence of prolonged action of lime on the acidity of pedzolized soils. L. L. Korshakova. *Pedology* (U.S.S.R.), 1968, 700-75. Abstracts of literature at different rates to acid sandy loam and loam soils show that after 25 yrs. the applications of 18 to 22.5 ton of lime per ha. maintained the high pH observed at the original application. Applications lower than 18 tons began to show a drop in pH after 15 yrs. Data show that this type of liming also increases the pH of the lowest horizons. L. S. Gelfe.

No. 9

15

CA

15

Effect of magnesium on the fertility of acid soils (pod-
sol and red). L. I. Kurableva. *Izvestiya Vsesoyuznogo
Inst. im. V. V. Dokuchaeva* 33, 82-88 (1950).—Prolonged
addn. of $(\text{NH}_4)_2\text{SO}_4$ caused a sharp rise in soil acidity and a
collateral drop in fertility. In certain cases this was count-
ered by addn. of MgSO_4 either alone or together with CaCO_3 .
The effectiveness of MgSO_4 and CaCO_3 addns. as well as the
proportions in which they are added depended on the na-
ture of the soil and the plants grown. M. Hosen

CA

The influence of systematic applications of manure and plant cover on the phosphate regime in sod-podzolized soils. L. I. Korabeyva, *Pochvovedenie* (Pedology) No. 2, 101-11 (1951).—Continued systematic manuring increases the inorg. and org. P of any soils. Depending on the soil type different groups of mineral phosphates accumulate. In podzolized loams, the more easily available P (extractable with CH_3COOH) as well as the more insol. forms (HCl-sol.) are found. In the lighter-textured podzolized soils, such as sandy loams, and in the gray soils CH_3COOH -sol. P only can be found. The acid-sol. P of manure is not as stable as the alkali-sol. P. The former is rapidly mineralized and serves as the source of mobile forms of P. The alkali-sol. P is more stable and is not easily decomposed. Fallow soils contain less of the org. forms of P whereas virgin forest gray soils have a high org. P content. J. S. Jelle

KORABLEVA, L. I.

Effect of potash fertilizers on the structure of soil under field conditions. L. I. Korableva (Pochvovedenie, 1953, No. 3, 38—46; *Soils & Fert.*, 1953, 15, 299).—Potash fertilizers caused no deterioration of structure in podzolized soils and red earths. Contrary results reported earlier were probably due to use of K fertilizers containing much Na. A. G. POLLARD.

Soil INST. im V. V. Dokuchayev, Acad. Sci USSR, Moscow

KORABLEVA, L. I.

Chemical Abstracts
May 25, 1954
Soils and Fertilizers

②
Effectiveness of fertilizer on bottomlands. L. I. Korab
leva and Z. A. Prokhorova. *Pochvedenie* 1953, No. 10,
27-36. -Delta and bottomland soils are deficient in K,
high in cation-exchange capacity with appreciable quanti-
ties of Ca and Mg. There is no appreciable response to N.
J. S. Joffe

The application of lime and magnesium fertilizers to sandy and sandy loam turf-podzols
Moskva, Akad. nauk SSSR, 1954. 97 p. (Nauchno-populiarnaia seriia)

Journal of Agriculture
Effect of lime and magnesium fertilizers on the fertility of sod-
podzolized sandy loam acid soils. L. I. Kuzmina (Pechovodens,
1954, No. 3, 17-32).—Alfalfa did not grow well in water culture at
pH 3.5-4.0 and did not absorb Mg easily. In pot experiments
with oats and millet the harmful effect of soil acidity was partly
overcome by application of lime or Mg. Mg did not increase the
growth of barley unless lime was also added. Acid soil was best
reduced by treatment with lime + Mg. Simultaneous use of Mg
reduced the lime requirement of many plants. With field-grown
potatoes lime + Mg produced better crops than did lime alone.
SOILS & FERT. (A. G. P.).

KORABLEVA, L.I.

USSR/Soil Science - Mineral Fertilizers.

J-3

Abs Jour : Ref Zhur - Biol., No 2, 1958, 5789

Author : Korableva, L.I.

Inst : -

Title : Fertilizing Light Soils with Magnesium

Orig Pub : Udobreniye i urozhay, 1956, No 10, 14-20

Abstract : Insufficiency of magnesium in sandy and sandy loam soils is especially marked when the soil gives an acid reaction, thus hindering the plant's absorption of magnesium. The results of vegetation, field, and production experiments have demonstrated that simultaneous application of magnesium and lime is the most effective method. The following increases in yield were achieved: potatoes - 47-60 centners/hectare; corn - 30 to 69 centners/hectare [sic]; rye - 4.3 to 5.6 centners/hectare; millet - 8 to 10 centners/hectare. Kalimag [a potassium-magnesium fertilizer] dolomitic limestone, and several kinds of marl may be used as magnesium fertilizers.

Card 1/1

Chemical characteristics of light Brown gley-like and deep meadow soils in Transcarpathia. Trudy Pochv. inst. 50:275-307 '57. (MLBA 10:4)
(Transcarpathia—Soil chemistry)

KORABLEVA, L.I.

Acidity of red loams and ways to eliminate its negative effect on
crop yield. Trudy Pochv. inst. 50:308-321 '57. (MLRA 10:4)
(Soil acidity) (Soil, Red)

KORABLEVA, L.I.

All-Union Congress on Methods of Agrochemical Soil Research.
Izv.AN SSSR Ser.biol. 23 no.2:251-252 Mr-Apr '58. (MIRA 11:4)
(SOIL RESEARCH--CONGRESSES)

KORABLEVA, Lyudmila Ivanovna, kand.sel'skokhoz.nauk; KATSIEL'SON, S.M.,
red.; ATROSHCHENKO, L.Ye., tekhn.red.

[Applying fertilizers the scientific way; based on the combined experience of the workers of the "Bol'shevik" State Farm and the Soil Institute of the U.S.S.R. Academy of Sciences] *Primeniat' udobrenia na nauchnoi osnove; iz op'ta tvorcheskogo soдруzhestva rabotnikov sovkhosa "Bol'shevik" i Pochvennogo instituta Akademii nauk SSSR. Moskva, Izd-vo "Znanie," 1960. 37 p. (Vsesoiuznoe obshchestvo po rasprostraneniю politicheskikh i nauchnykh znanii. Ser.5, no.2)*
(Fertilizers and manures)

KORABLEVA, L.I.

Agrochemical properties of turf-Podzolic soils of Moscow Province
and the effectiveness of fertilizers applied to them. Trudy Pochv.
inst. 55:126-157 '60. (MIRA 13:11)

(Moscow Province--Field crops--Fertilizers and manures)
(Podzol)

KORABLEVA, L.I.

Magnesium nutrition of plants in sandy turf-Podsolic soils and sandy
clays. Trudy Pochv. inst. 55:192-221 '60. (MIRA 13:11)

(Plants, Effect of magnesium on)

(Soil acidity)

(Field crops--Fertilizers and manures)

KORABLEVA, L.I.

Agrochemical characteristics of the Moskva River flood land soils.
Pochvovedenie no.4:30-39 Ap '61. (MIRA 14:6)

1. Pochvennyy institut imeni V.V.Dokuchayeva AN SSSR.
(Moskva Valley—Soils)

KORABLEVA, L.I.; ACHKASOVA, G.A.

Phosphorus balance of soils in the Oka River floodlands. Pochvovedenie
no.4:76-86 Ap '63. (MIRA 16:5)

1. Pochvennyy institut imeni V.V.Dokuchayeva.
(Oka Valley--Soils--Phosphorus content)

KORABLEVA, L.I., kand. sel'skokhoz. nauk

Agrochemical studies of the soil and the use of fertilizers.
Zhur.VKHO 10 no.4:408-416 '65.

(MIRA 18:11)

KORABLEVA, N.P.

Author: Korova, N. P., Korobova, N. P.
 Title: On Certain Physiological and Morphological Effects on the Eyes of Potato Tubers Subjected to Irradiation (O nekotorykh fiziologicheskikh i morfolozicheskikh izmeneniyakh i glazkov kartofel'nykh klubney pod vliyaniyem oblucheniya)
 Publication: Doklady Akademii nauk SSSR, 1958, Vol. 111, No. 6, pp. 1001-1003 (1958)

Summary: The X-ray and γ -irradiation of potatoes in doses of more than 1,000 roentgen hinders the germination of the tubers (Refs. 1-4). When doses of more than 10,000 roentgen are applied it is completely suppressed. But also in this case the vegetation zone is not killed although the plant is deprived of the possibility of normal development (Refs. 4-6). By irradiation also respiration is reduced according to the applied doses and the age of the plants; young plants show more reaction. This paper deals with the results of irradiation by radioactive cobalt. It was cytologically proved that even at 10,000 roentgen the vegetation zones remained alive. Table 1 shows that the eyes react upon irradiation by a change of the respiration intensity. The intensity of reaction depends on the dose. When a dose of 160,000 roentgen is applied the respiration decreases by more

100-1001-1-12-4-

On Certain Physiological and Morphological Changes in the Eyes of Potato Tubers Subjected to Irradiation

than 50%. Cytochemical differences in the distribution and the activity of ferments were revealed one month after the irradiation (Fig. 1). Great differences are between the structure of irradiated eyes and those of a normal tuber (Fig. 2). As a result of irradiation an alkalization of protoplasmic colloid takes place. One of the characteristic features after an ended period of rest of the tubers is, however, the increased activity of these colloids (Ref. 3). Figure 3 shows that the isoelectric zone of the proteins is shifted towards the acid direction. This fact becomes most obvious at 10 000 röntgen. This implies a change of the intra-cellular pH-value. The greatest effect is obtained during the first 24 hours after irradiation (dose 10 000 röntgen). In the second series showed that serious changes of several processes take place in the meristem of the tubers. The mentioned changes could not exhaust the whole complicated problem. Doubtlessly disturbances in the nucleic metabolism are of great importance. At the moment the authors are dealing with this problem. V. N. Burdakov and V. V. Metlitskiy directed the mentioned research.

KORABLEVA, N.P.

Conference on nucleic acids in plants. Nauch. dokl. vys. shkoly;
biol. nauki no. 4:208-209 '59. (MIRA 12:12)

(Nucleic acids--Congresses)

(Plants--Metabolism)

RUBIN, B.A.; METLITSKIY, L.V.; SAL'KOVA, Ye.G.; MUKHIN, Ye.N.; KORABLEVA,
N.P.; MOROZOVA, N.P.

Use of ionising radiations to control dormancy in potato
tubers during storage. Biokhim.pl. 1 ovoshch. no.5:5-101
'59. (MIRA 13:1)

1. Institut biokhimii imeni A.N.Bakha Akademii nauk SSSR.
(Plants, Effect of gamma rays on)
(Potatoes--Storage)

17(3).

SOV/20-126-4-53/62

AUTHOR: Korableva, N. P.

TITLE: The Effect of γ -rays on the Content of Sulfhydryl Compounds in Potato Tubers (Vliyaniye gamma luchey na sodержaniye sul'fgidril'nykh soyedineniy v klubnyakh kartofelya)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 4, pp 880 - 883 (USSR)

ABSTRACT: The protein molecules can be structurally changed by ionizing radiation. These changes are similar to the heat denaturing changes. Denaturation is regarded to be connected with the appearance of free sulfhydryl groups (-SH) due to the rupture of disulfide bridges (-S-S-) connecting individual peptide bridges. The effect of radiation on the state of the sulfhydryl- and disulfhydryl compounds was illustrated in several papers (Refs 2-5) on vegetable and animal organisms. The present paper represents one section of the multiple-purpose investigations carried out by the institute (see Association) concerning the effect of radiation on a possible storing-time extension of vegetables and potatoes (Refs 6,7). The γ -rays change the level and the orientation of several biochemical

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The Effect of γ -rays on the Content of Sulfhydryl
Compounds on Potato Tubers

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processes (Refs 8,9). The changes of the physico-chemical properties and of the level of the redox processes are apparently closely connected. It was interesting to clarify the dynamics of the content of the sulfhydryl and disulfhydryl compounds as well as of the ascorbic acid in potato tubers, and the effect of the γ -rays on the change of these compounds (Refs 10,11). The determinations were carried out in the control and test tubers ("Lorch" type) immediately after irradiation with different doses at an intensity of 500 r/min in the course of a long-lasting potato storage. The sulfhydryl groups and the ascorbic acid were summarily titrated by Til'man reagent. Figure 1 shows that the quantity of the sulfhydryl groups and disulfide bonds in various tuber tissues is unequal and variable in the course of storage. The sum of the -SH- and -S-S- groups decreases during storage. In the eyes of the control tubers (Fig 1a), the total content of these groups decreased from December to June to less than one-third, the content of -S-S- groups to less than one-sixth. The content of -SH groups increases from December to February, and decreases in April to a

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The Effect of γ -rays on the Content of Sulfhydryl
Compounds on Potato Tubers

SOV/20-126-4-53/62

level below the initial level. In the flesh, the amplitude is lower than in the eyes (Fig 1b). An irradiation with Co^{60} lowers the total content of -SH- and -S-S-groups immediately after treatment (Table 1). Doses of from 3000 to 100000 r are practically inefficient; only at 300000 r, the acid extract from the eyes completely loses the iodine-reducing capacity which is re-established after storing the material irradiated. The content of ascorbic acid is considerably lowered by irradiation, proportional to the dosis of radiation (Table 2). The very strong lability found for the sulfhydryl compounds, and a continuous alternation between the oxidized and the reduced form, lead to the conclusion about the important role of sulphurous polypeptides in the resting and germinating processes. The increased content of sulfhydryl compounds after irradiation can be a consequence of : 1) a change in the ratio between the -SH- and -S-S-groups in connection with other disturbances of the oxidative position, and 2) a partial protein-molecule disintegration under rupture of disulfide bonds. These changes also give proof of extensive changes of the redox circumstances in tissues after irradiation. L. V. Metlitskiy, Doctor of

Card 3/4

The Effect of γ -rays on the Content of Sulfhydryl
Compounds on Potato Tubers

SOV/20-126-4-53/62

Agricultural Sciences, conducted the work. There are 1 figure,
2 tables, and 11 references, 10 of which are Soviet.

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR (In-
stitute of Biochemistry imeni A. N. Bakh of the Academy of
Sciences, USSR)

PRESENTED: March 3, 1959, by A. I. Oparin, Academician

SUBMITTED: February 26, 1959

Card 4/4

KORABLEVA, N. P.

Cand Biol Sci - (diss) "Effect of gamma-radiation on the metabolism in merisystematic tissues of potato tubers." Moscow, 1961. 21 pp with illustrations; (Academy of Sciences USSR, Inst of Biochemistry imeni A. N. Bakh); 120 copies; price not given; (KL, 6-61 sup, 207)

20745

S/020/61/137/002/020/020
B103/B215

216300

1138, 1565

AUTHOR:

Korableva, N.P.

TITLE:

Effect of irradiation on the anatomical-physiological characteristics of the cones of growth of potato tubers

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 2, 1961, 454 - 457

TEXT: The author compares intact (control) and irradiated cones of growth of potato tuber buds (sort "Lorch") as to their morphology, histology, histochemistry, and biochemistry. She exposed test tubers to doses of 500 to 10,000 r of Co⁶⁰ gamma radiation. The author first describes the cone of growth in the state of rest and at the onset of growth. The state of rest is characterized by flat shape, low amount of embryonal tissue, and early onset of aging processes in tissues. Richest in ribonucleic acid (RNA) are the cells of the tunica, the derivatives of subapical initial meristem, and especially the central part of the peripheral meristem. The youngest leaf anlagen, nucleolus, and cytoplasm are very rich in RNA. The content of desoxyribonucleic acid (DNA) is also increased in the above cells. Richest in nucleic acid are the youngest cells of the cone of growth,

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X

Effect of irradiation on ...

which are capable of dividing. When germinating, nucleic acid and especially cytoplasmatic RNA are accumulated in the tissues of the tip of the shoot. Pyroninophilia rapidly increases in all tissues of the cone and the tip of the shoot. The growth of the shoot and the differentiation of its tissue are related to the accumulation of nucleic acid in nucleus and cytoplasm. After a 500 - 2,000 r irradiation of tubers, the structures of growing shoot and control (Fig. 3) differ. Morphologically, the irradiated shoot has the shape of a cup surrounded by three elongated leaves, one of them being the deformed tip of shoot, and the two others modifications of first leaves. Cells of the cone of growth are compressed and rich in RNA; however, the latter is unusually distributed. Cell walls and intercellular spaces have the most intense color. The color of the nucleolus is less intense than that of the control. The borders of the nucleus are not very distinct. Irradiation apparently affects organoids and the cell integrity so that the RNA distribution outside and inside the cell is diffuse. Medullary cells in the tip of shoot are considerably elongated. The whole shoot is thin and elongated like a leaf. Medullary cells contain much less nucleic acid than the cone of growth. In spite of its high content of such

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acids, the cone temporarily loses its capability of growth. During that period, medullary cells and internode are considerably elongated. Hence, the formation of the above "cup". The author concludes that the inter-change of nucleic acid is disturbed by irradiation, and the division of the cells in the cone of growth is stopped. After 25 - 30 days, the shoot becomes again normal and starts growing like the control. When exposed to, 8,000 - 10,000 r and more, tubers do not germinate. The above changes become even more intensive, and the differentiation of tissue disappears. Cells remain equally large, but their vacuoles and intercellular spaces are large, and their nuclei deformed. The amount of pyroninophile RNA in the cytoplasm is rapidly reduced. The content of DNA in the nucleus and of RNA in the nucleolus is much lower than those of control tubers or tubers exposed to smaller doses. Table 1 shows the content of nucleic acid in tuber buds when stored. The author concludes that the content of these acids is decreased immediately after irradiation with 5,000 r and more. The greatest differences between irradiated tubers and control were observed during the transition from the state of rest to germination. It is noted that the disturbance of growing processes in the cone is closely related to the changes of nucleic metabolism caused by irradiation. She

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Effect of irradiation on...

thanks Professor B.A. Rubin, L.B. Metlitskiy, Doctor of Agricultural Sciences, and Professor V.K. Vasilevskaya for valuable advice. There are 3 figures, 1 table, and 4 Soviet-bloc references.

ASSOCIATION: Institut biokhimii im. A.N. Bakha Akademii nauk SSSR
(Institute of Biochemistry imeni A.N. Bakh of the Academy of Sciences USSR)

PRESENTED: November 14, 1960 by
A.I. Oparin, Academician

SUBMITTED: October 31, 1960

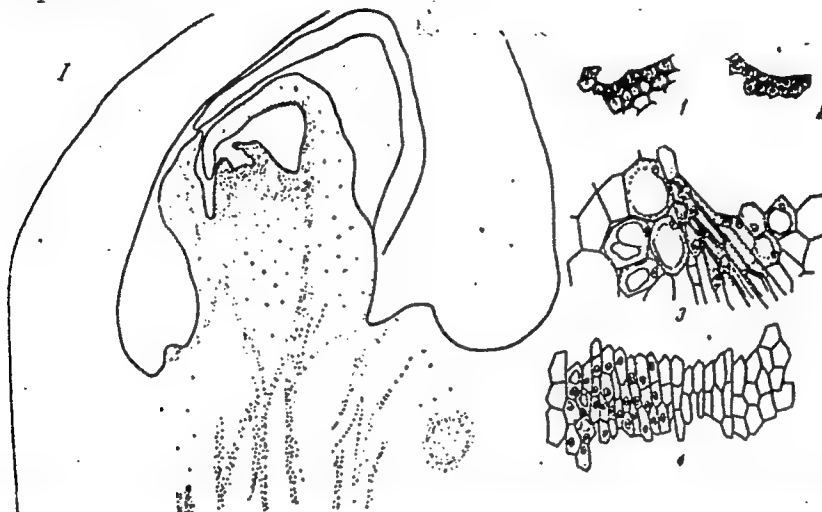
Legends: Fig. 3: Distribution of nucleic acids in the tip of shoot during irradiation. I) RNA in the germinating tuber bud after 500 r: 1) tunica, 500 r, 2) tunica, control, 3) part of cambium-type layer with cells of cortex, cambium, and medulla, 500 r, 4) like 3, control; II) RNA in the germinating tuber bud of controls: 5) tunica, 6) procambium, 7) central axis meristem; III) RNA in the tuber bud 6.5 months after irradi-

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Effect of irradiation on ...

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B103/B215

ation with 10,000 r: 8) procambium, 9) tunica, 10) like 7; IV) DNA in the germinating tuber bud of control: 11) tunica, 12) procambium, V) DNA in the tuber bud 6.5 months after irradiation with 10,000 r, 13) like 7 and 10, and procambium.



Card 5/7

KORABLEVA, N.P., MOROZOVA, N. P., SALKOVA, YE.G., METLITSKIY, L.V.,
MUKHIN, YE.N., (USSR)

"Influence of γ -irradiation on Nuclear and Carbohydrate
Metabolism in Storage Organs of Plants."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow,
10-16 Aug 1961.

RUBIN, B.A.; METLITSKIY, L.V.; SAL'KOVA, Ye.G.; MUKHIN, Ye.N.; KORABLEVA, N.P.;
MOROZOVA, N.P.

Using ionizing radiations to control the dormancy of potatoes during
storage. Report No.2. Biokhim.pl.i ovoshch' no.6:5-57 '61.

(MIRA 14:6)

1. Institut biokhimii imeni A.N.Bakha AN SSSR.

(Plants, Effect of gamma rays on) (Potatoes-Storage)

35673

S/020/62/143/001/030/030
B144/B101

27.11.70

AUTHORS: Metlitskiy, L. V., Korableva, N. P., and Morozova, N. P.

TITLE: Effect of gamma radiation on nucleic acid metabolism in storage organs of plants

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 1, 1962, 225-227

TEXT: It was observed that gamma-radiosensitivity differs widely in onion bulbs (allium cera), potato tubers (P), and garlic bulbs (G) and decreases in the given order. Nucleic acid metabolism as the decisive factor of plant growth was investigated in meristematic (M) and storage (St) tissues. These were analyzed two days after irradiation and then every 30 days; conservation temperature 5°C. As shown previously, M are most strongly affected by disturbances of nucleic acid metabolism in irradiated P. In the present tests, guanylic, adenylic, cytidylic, and uridylic acids were reduced by 50% on irradiation of P with 10 kr. Surprisingly, nucleic acids were found to decrease even in nonirradiated M of G on longer conservation. The hypothesis of possible depolymerization and washing-out of the low-polymer fragments of nucleic acids, when these tissues are

Card 1/2

METLITSKIY, L.V.; SAL'KOVA, Ye.G.; MUKHIN, Ye.N.; KORABLEVA, N.P.;
MOROZOVA, N.P.

Use of ionizing radiation for controlling the dormancy of
potatoes in storage. Report No. 3. Biokhim.pl.i ovoshch.
no.7:5-50 '62. (MIRA 16:1)

1. Institut biokhimii imeni A.N.Bakha AN SSSR.
(Potatoes--Storage) (Gamma rays--Physiological effect)
(Dormancy in plants)

METLITSKIY, Lev Vladimirovich; KORABLEVA, Natal'ya Pavlovna;
OPARIN, A.I., akademik, otv. red.; MATVEYENKO, T.A.,
red.

[Biochemistry of dormancy of the storage organs of plants;
the nature of dormancy and methods of its control] Biokhi-
miia pokoia zapasaiushchikh organov rastenii; priroda po-
koia i metody upravleniia. Moskva, Nauka, 1965. 91 p.
(MIRA 18:11)

L 25810-66 EWT(1)/EWT(m)/T RM/JK

ACC NR: AP6015926

SOURCE CODE: UR/0216/65/000/004/0521/0532

AUTHOR: Korableva, N. P.; Metlitskiy, L. V. Metlizky, L. V. 46
B

ORG: Institute of Biochemistry im. A. N. Bakh, AN SSSR, Moscow (Institut biokhimi
AN SSSR)

TITLE: Influence of ionizing radiation on the growth processes and nucleic acid ⁶
metabolism of plants 1

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 4, 1965, 521-532

TOPIC TAGS: radiation plant effect, nucleic acid, ionizing radiation, plant metabolism,
plant growth

ABSTRACT: It is evident from this survey of the literature that the effects of irradiation on the morphogenetic processes in plant tissues is related to their physiological and functional states. Besides slowing of the growth rate, another typical effect is the degeneration of meristematic tissue. The fact that meristematic tissue (growing points of bulbs and tubers) is more sensitive to radiation than functionally formed tissue (parenchyma) is due largely to the greater vulnerability of its energy and nucleic acid metabolism.

The data suggest that the degree of inhibition of the growth processes and nature of the impairment of nucleic acid metabolism caused by ionizing radiation vary with the metabolism peculiar to a given plant species. The

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UDC: 577.1: 547.96 2

L 25810-66

ACC NR: AP6015926

biological principles underlying the action and its practical applications cannot be determined unless one takes into consideration the specific reaction of different plant species and organs to ionizing radiation.

Orig. art. has: 3 figures and 3 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 28Mar63 / ORIG REF: 034 / OTH REF: 035

Card 2/2 CC

DOLINEZHAL', Vladimir Antonovich, prof.; GRUM-GRZHIMAYLO, S.V., dots., retsen-
sent; KORABLEVA, P.M., inzh., red.; ML'KIND, V.D., tekhn. red.

[Durability of toothed gears] Prochnost' zubchatykh peredach.
Moskva, Gos. nauchno-tekhn. ind-vo mashinostroit. lit-ry, 1958.
129 p. (MIRA 11:10)

(Gearing)

SEMINOV, Aleksandr Pavlovich; KHAOML'SKIY, I.V., prof., doktor tekhn. nauk, retsenzent; KORABLEVA, P.M., inzh., red.; ML'KIND, V.D., tekhn. red.

[Seizure of metal.] Szhvatyvanie metallov. Izd.2., perer. i dop.
Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958.
279 p. (MIRA 11:10)

(Metals) (Friction)

PARASHCHUK, Valentin Leonidovich; YUDEL'SON, Nikolay Abramovich;
ANDROSOV, A.A., kand.tekhn.nauk, retsenzent; KORABLEVA, R.M.,
inzh., red.; SOKOLOVA, T.F., tekhn.red.

[Building and road machinery] Stroitel'nye i dorozhnye
mashiny. Moskva, Gos.nauchno-tekhn.izd-vo mashinostr.lit-ry.
1959. 376 p. (MIRA 12:10)

(Building machinery) (Road machinery)

KRASHENINNIKOV, D.N., inzh., obshchiy red.; KORABLEVA, R.M., inzh.,
red.; UVAROVA, A.F., tekhn.red.

[Catalog of spare parts for IsAZ-210, IsAZ-210G, IsAZ-210D,
and IsAZ-210E trucks] Katalog zapasnykh chastei avtomobilei
IsAZ-210, IsAZ-210G, IsAZ-210D i IsAZ-210E. Moskva, Gos.
nauchno-tekhn.isd-vo mashinostroit.lit-ry, 1959. 378 p.
(MIRA 12:6)

1. Yaroslavskiy avtomobil'nyy zavod, Yaroslavl.
(Motortrucks--Equipment and supplies)

KOSTIN, Mikhail Ivanovich; SHIMANOVICH, Stanislav Vladimirovich;
VERZHITSKIY, A.M., inzh., retsentsent; KORABLEVA, R.M., inzh.,
red.; UVAROVA, A.F., tekhn.red.

[Excavators; a handbook] Ekskavatory; spravochnik. Izd.2.,
dop. i perer. Moskva, Gos.nauchno-tekhn.isd-vo mashinostroit.
lit-ry, 1959. 523 p. (MIRA 12:6)
(Excavating machinery)

KORABLEVA, V. A.

13.2.14/43

AUTHORS: Yatsimirskiy, K. B. , Korabl'eva, V. A.

TITLE: The Thiocyanate Complexes of Manganese, Iron, Cobalt and Nickel (Rodanidnyye kompleksey margantsa, zheleza, kobal'ta i nikelya)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 2, pp.339-345 (USSR)

ABSTRACT: The equilibrium of the complex-formation of the following systems was investigated by the colorimetric indicator-method: $M^{2+} - CNS - M^{2+} = Mn^{2+}, Fe^{2+}, Co^{2+}, Ni^{2+}$. In all tests the concentration of thiocyanate-ion amounted to 0,0004965 mol/l and the concentrations of the metal-solutions 0,02 - 1 mol/l. By the calculation of the stability constant of the complexes it is proved that only complexes of the type $M(CNS)^+$ exist. The stability constant of $FeCNS^+$ is 0,048, of $MnCNS^+$ - 0,058, of $CoCNS^+$ - 0,031 and of $NiCNS^+$ - 0,021. The comparison of these values shows that $NiCNS^+$ represents the most unstable complex. For the determination

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of the stability of the $CuCNS^+$ -complex the colorimetric indicator-method is unsuitable, as the copper-thiocyanate complex is very unstable. There are 1 figure, 1 table, and 19 references, 4 of which are Slavic.

ASSOCIATION: Ivanovo Chemical-technological Institute (Ivanovsky khimiko-tekhnologicheskyy institut)

SUBMITTED: March 25, 1957

AVAILABLE: Library of Congress

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5(4)

AUTHORS:

Vasil'yev, V. P., Korableva, V. D.,
Yatsimirskiy, K. B.

SOV/153-58-3-30/30

TITLE:

Conference Discussion on the Methods of Investigating the
Complex Formation in Solutions (Soveshchaniye-diskussiya
po metodam izucheniya kompleksobrazovaniya v rastvorakh)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i
khimicheskaya tekhnologiya, 1958, Nr 3, pp 173 - 174 (USSR)

ABSTRACT:

From February 18 to 21, 1958 a conference discussion took place at the town of Ivanovo; it dealt with the subjects mentioned in the title. It was called on a decision of the VIIth All-Union Conference on the Chemistry of Complex Formations. More than 200 persons attended the conference, among them 103 delegates from various towns of the USSR. At the conference methods of determining the composition of the complexes in solutions were discussed, as well as the methods of calculating the instability constants according to experimental data and problems concerning the influence of the solvent upon the processes of complex formation. I. I. Chernyayev, Member, Academy of Sciences, USSR, stressed in his inaugural lecture the great importance and actuality

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of the problems to be dealt with, and wished the conference all the best in its work. I. V. Tananayev, on behalf of the Orgkomitet (Organization Committee) held a lecture on: "The Method of Determining the Composition of Compounds Formed in Solutions". In his lecture, V. N. Tolmachev dealt with the problem of the graphical interpretation of the method by Ostromyslenskiy-Zhob. It was proved that this method can also be used in such cases where the equilibrium of complex formation was turned complex by the hydrolysis or dimerization of the central ion. In the lecture by A. K. Babko and M. M. Tananayko, "Physical and Chemical Analysis of the Systems With 3 Colored Complexes in the Solution", the results of a systematic investigation in copper-quinoline-salicylate, as well as in copper-pyridine-salicylate systems by means of the optical method were dealt with. In the lecture by Ya. A. Fialkov the idea of a further investigation of the complex formation processes in solutions was developed. Besides the determination of the composition and stability of the complexes also the physical and chemical properties, the chemical nature and the structure of the complex compounds must be investi-

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gated. The lecture by K. B. Yatsimirskiy dealt with the conditions of checking the usefulness of the method of isomolar series in the determination of the complex composition. To be able to obtain objective results the position of the maximum at various concentrations of the components must be checked. A. K. Babko made several critical remarks concerning the lecture by I. V. Tananayev. He pointed out that such a method of investigation must be chosen that is connected with the characteristic properties of the system investigated. A. P. Komar' mentioned in his lecture that for the time being the method by Ostromyslenskiy-Zhob is the best for determining the complex composition, and should be employed as often as possible. This demands, however, that all instructions concerning this method are strictly obeyed. I. S. Mustafin, L. P. Adamovich and V. I. Kuznetsov took part in the discussion. K. B. Yatsimirskiy proved in his lecture "Hydrolytic Equilibria and the Polymerization in Solutions" that, if the hydrolysis products are polymerized, the "inclusion into the complex" and the "formation function" at a constant pH value are varied with the modification of the total concentration of

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the metal. Therefore all those methods may be employed for investigating the polymerization of this type which make the determination of at least one of the two functions mentioned possible. It was proved that the hypotheses on the existence of complexes of the type "nucleus + chain members" can also be founded from the viewpoint of structural concepts: particles the charge of which does not exceed unity can occur as "chain members". The usefulness of the characterization of areas of existence of polymers by means of surface diagrams: "total concentration of the metal - pH" was proved as well. I. I. Alekseyeva and K. B. Yatsimirskiy in their lecture "Investigation of the Polymerization of Iso-Poly Acids in Solutions" mentioned experimental results of the investigation of the polymerization in solutions of molybdic acid. The authors proved that especially the molybdic acid within a certain range of the pH values and the concentrations exists as a number of compounds that can be expressed by an overall formula $\text{MoO}_4(\text{HMoO}_4)^{n-2}$. In the lecture by N. V. Aksel'rud and V. B. Spivakovskiy investigation results on basic salts taking into

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account the complex formation in solutions by means of the potentiometric method were mentioned for systems with zinc, cadmium and indium. In the evaluation of their results the authors employed the method of the table difference. The calculation of the consecutive constants was carried out according to the interpolation formula by Newton. M. A. Chepelevtskiy held a lecture on "pH Measurement Method of the Solutions in Combination With the System Analysis of the Solubility Diagram of the System $\text{Cu}^{2+}\text{-HCl} - \text{H}_2\text{O}$ in Investigating Complex Copper Compounds in Saturated Solutions". It was found that the substance at the bottom of the liquid is more basic than the solution: furthermore, the increased acidity of the solution from the viewpoint of the formation of hydroxy-chloro complexes in the solution was explained. V. I. Kuznetsov opened the discussion with his lecture; he pointed out the necessity of utilizing the concepts worked out in the investigations of the polymerization in organic chemistry in the chemistry of polynuclear complexes. A. A. Grinberg thinks that the new approach of the hydrolysis

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investigation as developed by the Scandinavian school is of high value. He also pointed to the necessity of studying the kinetics of the polymerization process and a quantitative determination of the strength of the polymers. A. K. Babko pointed out that the study of the polymer structure was necessary. N. P. Komar' mentioned in his lecture that the rather widely spread polymerization type according to the scheme "nucleus + chain members" is not obtained in all cases. The following scientists took part in the discussion: V. N. Tolmachev, A. V. Ablov, I. S. Mustafin, I. V. Tananayev and K. B. Yatsimirskiy. A. K. Babko then discussed in his lecture "Methods of Determining the Dissociation Constant of the Complex Groups in Solutions" the main principles of determining the instability constants. N. P. Komar' discussed in his lecture "Calculation Methods of the Instability Constants of the Complex Compounds According to Experimental Data" the possibilities of using the known calculation methods of the instability constants for various cases of the complex formation in solution. If several mononuclear complexes are formed the displacement method by Abegg and Bodlender (completed by

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A. K. Babko) cannot be recommended for the calculation of the instability constant. The lecturer discussed the dissolution methods of the polynomials proposed by B'yerrum, Leden, Rossoti, Sketchard, Edsolloy and other authors. The constants calculated in this way are not very accurate. It was proved that the method of successive approximations can lead to wrong conclusions as to the chemical processes taking place in the system investigated. The most probable value of the physical constants can be obtained by the method of the least squares. B. V. Ptitsyn, Ye. N. Tekster and L. I. Vinogradova described the determination methods of the instability constants of the oxalate complexes of niobium, uranium and iron which are based on the investigation of the equilibrium displacement of the complex formation by silver ions. N. K. Bol'shakova, I. V. Tananayev and G. S. Savchenko held a lecture on "The Role of the Time Factor in the Investigation of the Complex Formation". In the discussion on the lectures A. A. Grinberg mentioned that due to the slow adjustment of the equilibria the methods discussed of determining the instability constants (palladium and cobalt

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complexes) can often not be employed. A. V. Ablov pointed out the necessity of devising direct methods of proving the existence of intermediate forms in a step-wise complex formation. K. B. Yatsimirskiy mentioned that the instability constants of slowly dissociating complexes can be calculated from thermochemical data. L. P. Adamovich, A. M. Golub among others took part in the discussion on the lectures. A. K. Babko requested inclusion in the next conference on the chemistry of complex compounds a lecture in which various calculation methods of the instability constants should be discussed by the example of actual cases. This should clarify to which divergencies of the values of the constants different methods of evaluating the experimental data can lead. N. P. Komar' stressed that in the determination of the instability constants all chemical equilibria should be taken into account that render complex the complex formation process in the solution, especially the hydrolysis processes of the central ion and the addendum. In the lecture delivered by V. M. Peshkova and A. P. Zozulya "Application of the Distribution Method to the Investigation of the Stability Constants

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of Some Thorium Complex Compounds" results obtained from the experimental investigation of the distribution of thorium compounds in the systems: acetylacetone - benzene - water, and 2-oxy-1,4,-naphthoquinone - chloroform - water were given. From these data the instability constants of the thorium complexes with acetyl-acetone and 2-oxy-1,4-naphthoquinone were calculated. I. V. Tananayev, G. S. Savchenko and Ye. V. Goncharov held a lecture on the application of the solubility method in the determination of the stability of complex compounds in solutions. In this lecture also other methods of investigating complex formation processes in the solution were discussed (pH measurement, measurement of the optical density, as well as of the heat of mixing). B. D. Berezin held a lecture on the "Application of the Solubility Method in Studying the Phthalocyanine Complexes of Metals". He used the determined quantitative characteristics of the reaction of the transition of the phthalocyanides of cobalt, nickel, copper and zinc, as well as of the free phthalocyanine into the sulfuric acid solution for the theoretical reasoning, and as an experimental proof of the existence of

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π -bonds in the complexes investigated. These characteristics also served him as a proof of new electronic formulae of phthalocyanine and its complex derivatives. In the lecture delivered by I. L. Krupatkin on "The Method of the Two Solvents as a Method of Investigating the Formation and Properties of Organic Complexes" it was proved that this method makes it possible to determine the number of complexes formed in the system, their composition and relative stability. V. I. Kuznetsov, A. K. Babko, N. P. Komar', I. S. Mustafin and Ya. I. Tur'yan took part in this discussion. In the lecture delivered by A. A. Grinberg and S. P. Kiseleva on the complex palladium compounds (II) with a coordination number above four it was proved that in the case of a large chlorine and bromine ion excess complexes with the coordination number 5 are formed. The instability constants of these complexes were estimated. L. P. Adamovich mentioned a new manipulation in the spectrophotometric investigation of the complex compounds that can be used in systems with the formation (or predomination) of one single complex. This method makes it possible to determine the composition and instability constant

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of the complex. In the lecture delivered by K. B. Yatsimirskiy and V. D. Korableva the application of the theory of crystalline fields for the determination of the composition and structure of the chloride complexes of cobalt, nickel and copper according to the absorption spectra of these complexes was discussed. It was proved that in a hydrochloric acid concentration above 5 mole/liter in the solution there exists an equilibrium between the tetrahedric and octahedric form of the cobalt chloro complexes. Yu. P. Nazarenko proved in his lecture "The Application of Radioactive Isotopes in the Investigation of the Solvation Equilibrium in Solutions of Complex Compounds" the possibility of using data on the isotope exchange to clarify the structure of the complex and mechanism of the hydration processes. V. Klimov mentioned in his lecture the use of radioactive isotopes in the study of tin and antimony complexes in non-aqueous solutions. A. V. Ablov, V. N. Tolmachev, V. I. Kuznetsov and A. M. Golub took part in the discussion of the lectures. The usefulness of employing the theory of the crystalline fields in explaining the results obtained from the absorption spectra of the com-

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plex compounds was stressed. In the lecture delivered by I. A. Shek on "The Investigation of the Complex Formation by the Method of the Dielectric Permeability and the Polarization" the principles of the methods mentioned were presented. This method was employed for investigating the compounds of the type of the "affiliation" products. The lecture delivered by I. A. Shek and Ye. Ye. Kriss "Employing the Method of the Dielectric Constant for Investigating Complex Compounds of the Type of Crystal Solvates in Solutions" dealt with the investigation of the solvates of lanthanum and cerium chlorides with ketones, as well as with the study of the compounds formed in heterogeneous systems with tributyl phosphate and nitric acid. V. F. Toropova gave in her lecture "The Polarographic Method of Investigating the Complex Formation in Solutions" a survey of the applications of the polarographic method in the study of the complex compounds, and illustrated several fine characteristic features of this method. In the lecture delivered by T. N. Sumarokova "The Cryoscopic Method of Investigating the Complex Formation Reactions" a survey of the possibilities of the cryoscopic method was given, and its

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applicability in the study of several complex compounds of stannic chloride with organic substances was proved. A. M. Golub described the results of his investigations of thiocyanate complexes of several metals. A vivid discussion took place on the lectures held. Ya. A. Fialkov and Yu. Ya. Fialkov considered the cryoscopic method of investigating complex compounds to be of considerable value. K. B. Yatsimirskiy pointed out that the publication of the surveys on individual methods of investigating the complex formation reactions would be desired; this concerns especially the polarographic method. The cryoscopic method should be brought to a level that makes the calculation of the equilibrium constants of the processes to be investigated possible. The problem of the method of evaluating the experimental results becomes more and more important. Many scientists use the instability constants without taking into account the way in which they had been obtained. The calculation methods employed by A. M. Golub are one step back, as compared to those employed at present. In his lecture N. P. Komar' pointed out the extremely great importance of the mathematical

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evaluation of the results obtained, as well as of the plotting of curves. A. K. Babko suggested selecting one or two systems that are experimentally well investigated, and to evaluate the results obtained according to different methods so that it is possible to check and evaluate them. Ya. I. Tur'yan took part in the discussion. Ya. A. Fialkov discussed in his lecture "The Effect of the Solvent on the Complex Formation Process as Well as on the State of Equilibrium in the Solutions of Complex Compounds" the influence exerted by the solvents upon the molecular state, upon the solvation of the system components, upon the stabilization of the complexes formed in the system, upon the step-wise dissociation of the complexes and upon a number of other processes. The influence exercised by the dielectric constant upon the complex formation process was discussed. It was concluded that a direct relation does not exist, and that the chemical nature of the solvent must be taken into account. A. V. Ablov and L. V. Nazarova held a lecture on "The Spectroscopic Investigation of Nickel Cobalt 'Pyridinates' in Various Solvents". The instability constants of the complexes were determined and it was proved that the

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stability of the 'pyridinates' is changed in dependence on the solvent. Ya. I. Tur'yan in his lecture "The Influence of the Solvent Upon the Composition and Stability of Complex Ions" discussed the polarographic investigation method of the chloride and thiocyanate complexes of lead in aqueous ethanol solutions at different content of the non-aqueous solvent and at a constant ionic strength. A step-wise character of the complex formation was found as well as the instability constants of the complexes. The influence of the dielectric constant of the solution on the stability of the investigated complexes was proved. In the lecture by V. P. Vasil'yev on the "Investigation of Aquo Complexes in Mixed Solvents" the main attention was devoted to the necessity of the qualitative recording of the solvation effects in the complex formation. The applicability of the polarographic method in the determination of the composition and stability of the aquo complexes in mixed solvents was proved and experimental material on the thermodynamics of the dissociation of the cadmium-aquo complexes in aqueous ethanol solutions was mentioned. V. N. Tolmachev, V. I. Kuznetsov

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SOV/78-3-8-46/48

AUTHORS: Vasil'yev, V. P., Korableva, V. D., Yatsimirskiy, K. R.

TITLE: Conference Discussion on the Methods of Investigating Complex Formations in Solutions (Soveshchaniye-diskussiya po metodam izucheniya kompleksobrazovaniya v rastvorakh)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 8, pp. 1982-1986 (USSR)

ABSTRACT: From February 18 - 21, 1958 a conference with discussions took place at Ivanovo, which dealt with the methods of investigating the complex formations in solutions. At this conference the methods of determining the composition of the complexes in solutions, the methods of calculating the stability constants on the basis of experimental data, as well as the influence exerted by the solvents on the process of complex formation were discussed. Numerous experimental and theoretical papers were submitted to the conference, which dealt with the process of complex formation in aqueous and non-aqueous solutions. Especially methods concerning the composition of the complexes as well as methods of investigating step-wise complex formations were dealt with in detail.

5(2,4)

AUTHORS:

Yatsimirskiy, K. B., Korableva, V. D.

SOV/1958-58-4-4/22

TITLE:

Absorption Spectra of Cobalt, Nickel and Copper-Salts
in Concentrated Hydrochloric Acid (Spektry pogloshcheniya
rastvorov soley kobal'ta, nikelya i medi v kontsentriro-
vannoy khloristo-vodorodnoy kislote)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimiches-
kaya tekhnologiya, 1958, Nr 4, pp 19 - 28 (USSR)

ABSTRACT:

The above mentioned spectra have not yet been investigated
as carefully as those in aqueous solutions (Refs 1-8).
Previous investigations are continued in the present
paper (Refs 13,14). On the basis of the spectra and
fundamental ideas of the theory of crystalline fields
the authors tried to ascertain the composition and
structure of the complex compounds formed in solutions.
The spectra were taken by means of the spectrophotometer in
aqueous and HCl-solutions between 220 and 1200 mμ. The
solutions used in the tests were obtained by corresponding
dilution from initial solutions containing cobalt,

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nickel, copper nitrate and cobalt chloride. The spectra taken are shown in figures 1-3. A band with an absorption maximum at 300 mμ can be seen clearly in the spectra of the aqueous solutions of the above nitrates. The band is characteristic of the nitrate ion (Ref 17). It may be assumed that the formation of the band is connected with the transition of electrons within the ion itself, with the transition of electrons from the nitrate ion to the metal ion, or vice versa. The maximum at 300 mμ is shifted with increasing HCl-concentration, and a new one is formed with its center at 270 mμ for hydrochloric cobalt, at 300 mμ for nickel, and at 380 mμ approximately for copper. The new maximum is apparently conditioned by the transition of electrons from the chlorine ion to the metal ion. The formation of the new shifting band in the ultraviolet spectral range leads to the assumption that chlorine complexes of these metals exist in the hydrochloric solutions of the above mentioned three metals. Then the spectra of each of

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Absorption Spectra of Cobalt, Nickel and Copper-Salts
in Concentrated Hydrochloric Acid

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these metals are discussed individually. The absorption spectra obtained may be interpreted according to the theory of the crystalline fields, if it is presupposed that a) cobalt forms octahedral pink-colored chlorine complexes and various tetrahedral lightblue-colored complexes from the HCl-concentration of 5 mol/l onward; b) nickel forms various octahedral complexes $[\text{NiCl}(\text{H}_2\text{O})_5]^+$ and $[\text{NiCl}_2(\text{H}_2\text{O})_4]$ in HCl-solutions; c) the copper chloride complexes are formed step-like, being probably of tetragonal structure. There are 9 figures, 2 tables, and 30 references, 4 of which are Soviet.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskii institut (Ivanovo
Institute of Chemical Technology) Kafedra analiticheskoy
khimii (**Chair of Analytical Chemistry**)

SUBMITTED: October 14, 1957
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KORABLEVA, V. D., Candidate Chem Sci (diss) -- "Complex halogen and thiocyanogen compounds of the elements in the middle of the fourth period". Ivanovo, 1959.
18 pp (Min Higher Educ USSR, Ivanovo Chem-Tech Inst), 150 copies (KL, No 25, 1959, 128)

S/153/60/003/006/009/009
B103/B206

AUTHORS: Vasil'yev, V. P., Korableva, V. D., Yatsimirskiy, K. B.

TITLE: Conference on kinetic analysis methods

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i
khimicheskaya tekhnologiya, v. 3, no. 6, 1960, 1113-1116

TEXT: In the introduction the authors state that coordination and discussion of kinetic analysis methods have been deficient thus far, although they are successfully studied in the USSR and abroad. They are of special importance for the determination of minute amounts of admixtures and concentrations of elements. In this connection the Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya SSSR (Ministry of Higher and Intermediate Special Educations, USSR) convened a Conference on Kinetic Analysis Methods, which was held at the Ivanovskiy khimiko tekhnologicheskii institut (Ivanovo Institute of Chemical Technology) from June 14 to 16, 1960. 16 lectures were delivered by collaborators of the Institut geokhimii i analiticheskoy khimii AN SSSR (Institute of Geochemistry and Analytical

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Chemistry AS USSR), Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry AS UkrSSR), the Universities of Moscow, Kiyev and Dnepropetrovsk, the ~~Ivanovo~~ Institute of Chemical Technology and IREA (Institut khimicheskikh reaktivov, Institute of Chemical Reagents). The conference was also attended by representatives of several colleges, scientific research institutes and works laboratories as well as chemists from Ivanovo. The following subjects were dealt with in the lectures: I. P. Alimarin and Yu. V. Yakovlev; "The possibilities of modern determination methods of "ultrasmall" admixtures in "superpure" substances"; K. B. Yatsimirskiy, "The present state and development prospects of kinetic analysis methods". A. K. Babko, B. Ye. Reznik, V. I. Kuznetsov and I. G. Shafran participated in the discussion. Further lectures dealt with the following subjects: A. K. Babko and L. V. Markova: "The photometric determination of microamounts of sulfides and sulfur in metals on the basis of the catalytic effect on the iodine-azide reaction"; B. Ye. Reznik and N. V. Pchelkina, "The photometric determination of copper and molybdenum on the basis of their catalytic effect"; B. Ye. Reznik, G. M. Ganzburg and N. A. Bednyak, "Study of the catalytic effect of some transition elements

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B103/B206

Conference on kinetic analysis...

on molybdenum reduction by means of thiocyanate"; R. P. Pantaler, "A new kinetic determination method of tungsten- and molybdenum traces". L. T. Bugayenko reported on the use of kinetic analysis methods in radiation-chemical studies. S. I. Sinyakova gave a review on the use of kinetic catalytic currents in polarography for the determination of very small concentrations of several elements. K. B. Yatsimirskiy and L. I. Budarin, "Determination of the equilibrium constants in systems with complex formation on the basis of the study of catalytic polarographic currents"; V. I. Kuznetsov and Ye. S. Ul'yanova, "Radiation-kinetic determination of polonium". L. I. Budarin and K. Ye. Prik showed and discussed new types of instruments for the kinetic analysis. M. N. Orlova reported on "Kinetic determination methods of silver in solutions". Apart from those already mentioned, G. A. Pevtsov participated in the discussion. Further lectures: A. K. Babko and N. M. Lukovskaya, "The effect of complex-forming substances on the catalysis of the chemiluminescence reactions". L. P. Rayzman reported on the results of the study of complex formation of zirconium with anions of organic acids by the kinetic method. K. Ye. Prik, "Application of the kinetic method for studying the complex formation of tungsten (VI)

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S/153/60/003/006/009/009
B103/B206

Conference on kinetic analysis...

in solutions"; M. B. Shustova, "Vanadium determination in metallic titanium". M. L. Chepelevetskiy pointed out the necessity of studying the kinetics of heterogeneous processes, especially the formation of crystalline precipitates, for the purpose of using these data in the analysis. V. M. Peshkova pointed out the possibilities of combining the kinetic methods with extraction methods for the determination of several elements. Some results of the conference were summarized in the closing address by K. B. Yatsimirskiy and A. K. Babko. The authors are of the opinion that the conference was useful and showed that the kinetic analysis methods are being successfully developed in Moscow, Kiev, Ivanovo, Dnepropetrovsk, Khar'kov and Odessa. The delegates had the opportunity of informing one another on the results and of indicating future research trends. The authors propose to elaborate concrete methods for practical use in the analysis of industrial objects. New types of instruments are to be elaborated and manufactured in series. Standards with fixed content of microadmixture should be prepared and corresponding data should be published.

Card 4/4

VASIL'YEV, V.P.; KORABLEVA, V.D.; YATSIMIRSKIY, K.B.

Conference on kinetic methods of analysis. Zhur. anal. khim.
16 no. 1:118 Ja-F '61. (MIRA 14:2)

(Chemical reaction, Rate of) (Chemistry, Analytical—Congresses)

YATSIMIRSKIY, K.B.; KORABLEVA, V.D.

Acetonitrile complexes of silver. Zhur. neorg. khim. 9 no.2:
357-361 F'64. (MIRA 17:2)

KORABLEVA, V.K.

Use of hematogen to accelerate hemopoiesis in donors. Izv.AN Kazakh.
SSR Ser.khir. no.1:79-78 '47. (MLRA 9:8)

1. Kazakhskaya respublikanskaya stantsiya perelivaniya krovi.
(BLOOD)

KORABLEV, B.K.; KORABLEVA, V.N.

Dikes of the Aksoran 2 deposit and their role in the processes
of skarn formation and mineralization. Sbor.nauch.trud.KazGMI
no.18:255-267 '59.

(MIRA 15:2)

(Balkhash Lake region--Dikes (Geology))

(Balkhash Lake region--Skarns)

KORABLEVA, Z. P.

Cand Med Sci - (diss) "Cortical control of non-conditioned salivary secretion in children." Moscow, 1961. 12 pp; (Academy of Medical Sciences USSR, Order of Labor Red Banner Inst of Pediatrics); 250 copies; price not given; (KL, 5-61 sup, 203)

KORABLEVA, Z.P.

Nature of unconditioned salivation in relation to cerebral cortex
function in rheumatic fever in children. Vop. okh. mat. i det. 6
no. 5: 44-49 My '61. (MIRA 14:10)

1. Iz Gor'kovskogo pediatricheskogo nauchno-issledovatel'skogo instituta
(direktor - N.P. Zhukova, nauchnyy rukovoditel' - doktor meditsinskikh
nauk N.I. Kozin) Ministerstva zdravookhraneniya RSFSR.
(RHEUMATIC FEVER) (CEREBRAL CORTEX)
(SALIVA)

SOV/133-59-2-4/26

AUTHORS: Gerasimov, G.I., Korablin, F.A., Nemkin, V.M. and
Lednov, V.A.

TITLE: Operation of Iron Ladle Cars in the Blast Furnace
Department of the Magnitogorsk Metallurgical Combine
(Ekspluatatsiya chugunovoznykh kovshey v domennom tsekhe
MMK)

PERIODICAL: Stal', 1959,¹² Nr 2, pp 110-111 (USSR)

ABSTRACT: A comparison of the operation of two types of iron ladles: UZTM and Kling types with a spherical bottom and Bamag type with a flat bottom is compared. Main characteristics of the ladles are given in the table and fig.1. Service life of the flat ladle lining is on average 60 days during which 60,000 tons of iron is transported. Hot repairs of Bamag ladles present no difficulties. The lining wears out uniformly along the height of the ladle. The removal of worn lining can be done in 2 hours by one man using a crane (fig.2). Relining requires 6 man shifts. The service life of UZTM and Kling ladles is 40-45 days during which they transport 25-30,000 tons of iron. The lining

Card 1/2

KORABLIN, N.P.; ANISIMOV, A.I.; SLAVOLYUBOV, V.V.

Manifestation of rock pressure during the industrial testing of
a variant system of inclined layers with propless supports. Vop.
gor. davl. no.21:16-22 '64. (MIRA 18:8)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut.

KORABLIN, Nikolay Vasil'yevich, KOZHEVNIKOVA, V.A.. red.; SHCHERBAKOV, A.I.,
tekhn.red.

[Working on a round-the-clock schedule] Rabota po uplotnennoy
grafiku. [Kuibyshev] Kuibyshevskoe knizhnoe izd-vo, 1956. 19 p.
(MIRA 11:8)

(Efficiency, Industrial)
(Valves)

KORABLIN, V.G.

Studying methods for lubricating piston pins of a tractor engine.
Trudy KIPP no.16:87-93 '57. (MIRA 12:7)

1. Krasnodarskiy institut pishchevoy promyshlennosti, mekhani-
cheskiy fakul'tet, kafedra tekhnicheskoy mekhaniki.
(Tractors--Lubrication) (Pistons)

SOV/123-59-16-66926

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 16, p 430 (USSR)

AUTHOR: Korablin, V.G.

TITLE: The Service of the Connecting Rod Bearing

PERIODICAL: Tr. Krasnodarsk. in-ta pishch. prom-sti, 1957, vyp. 16, 95 - 97

ABSTRACT: Results are stated of investigations carried out in search of lubrication methods reducing the wear of the connecting rod journals of the crankshaft and of the piston pin. The oil draining points of the connecting rod bearing were changed, instead of one central outlet two displaced ones were made. Long tests with the D-54 engine under field conditions with these changes in design showed a great effectiveness: The displacement of the orifice reduced the wear of the connecting rod journal by 2 times, while the presence of two displaced outlets instead of one central one reduced this wear by four times in comparison with the wear taking place with the present method of draining the lubricant from the connecting rod bearings. Also the wear of the piston pins is reduced.

A.V.V.

Card 1/1

*Krasnodarsk Inst Food Industry.
Mechanics faculty, Chair of Technical Mechanics*

OVCHARENKO, F.D., akademik, doktor khim.nauk, orv.red.; GORSHKOV, A.A., red.;
USENKO, I.S., doktor geol.-min. nauk, red.; DAVYDOV,
G.M., kand. ekon. nauk, red.; KHAN, B.Kh., kand. tekhn.nauk, red.;
KORABLIN, V.P., inzh., red.; SHTUL'MAN, I.F., red.; DAKHNO, Yu.B., tekhn.
red.

[Stone casting] Problemy kamonnogo lit'ia. Kiev, Izd-vo
AN USSR, 1963. 226 p. (MIRA 17:2)

1. Akademiya nauk URSR, Kiev. Rada po vyvchenniu produktyv-
nykh syl URSR. 2. Akademiya nauk Ukr.SSR (for Ovcharenko).
3. Chlen-korrespondent AN Ukr.SSR (for Gorshkov). 4. Sovet po
izucheniyu proizvoditel'nykh sil Ukr.SSR (for Davydov).

KOSINSKAYA, A.V., [Kosyn'ka, A.V.]; BESPAL'KO, N.A.; KORABLIN, V.P.;
KHAN, B.Kh.

Andesite-basalts in Transcarpathian of the Ukrainian S.S.R.
as raw materials for obtaining cast stones. Geol. zhur. 23
no.5:62-72 '63. (MIRA 16:12)

BORISOV, G.P.; KORABLIN, V.P.; KHAN, B.Kh.

Continuous casting equipment for the manufacture of nodular
cast iron balls for ball mills. Nauch. trudy Inst. lit. proizv.
AN URSR 11:91-94 '62. (MIRA 15:9)

(Cast iron)

(Continuous casting—Equipment and supplies)

DNEPRENKO, K.V., inzh.; KORABLIN, V.P., inzh.

Burning mixed gas in radiation tubes. Met.i gornorud.prom.
no.5:67-70 S-0 '62. (MIRA 16:1)

1. Institut ispol'zovaniya gaza AN UkrSSR.
(Furnaces, Heat-treating)
(Heat—Radiation and absorption)

DOROFYEV, V.A., inzh.; LIPOVSKIY, I.Ye., inzh.; KORABLIN, V.P.,
inzh.; KHAN, B.Kh., kand. tekhn. nauk

Obtaining stone castings of amphibolites. Mashinostroenie
no.1:38-41 Ja-F '63. (MIRA 16:7)

1. Donetskii kannelitsynyy zavod (for Dorofeyev, Lipovskiy).
2. Institut liteynogo proizvodstva AN UkrSSR (for Korablin,
Khan).

(Amphibolite)

KORABLIN, V.V.; SEMENOV, I.V.

Testing the performance of horizontal separators in the Maikop gas-
condensate field. Gaz. prom. 10 no.8:12-17 '65. (MIRA 18:9)

ZARNITSKIY, G.E.; KONOVALOV, V.A.; KORABLIN, V.V.

Investigation of the operation of a starting turbine in gas-distributing station No.4 in Krasnodar. Gas. delo no.9:9-13 '63. (MIRA 17:8)

1. Krasnodarskiy filial Vsesoyuznogo zaochnogo inzhenerno-stroitel'nogo instituta i Gazopromyslovoye upravleniye No.1.

SENKEVICH, N.A., kand. med. nauk; KORABLINA, I.N.

Case of intravital diagnosis of thrombosis of the pulmonary artery
in serious silicotuberculosis. Trudy 1-go MMI 28:143-147 '64.

(MIRA 17:11)

1. Klinicheskiy otdel Instituta gigiyeny truda i professional'nykh
zabolevaniy (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A. Ista-
vet) i kafedra professional'nykh bolezney (zav. - prof. A.M. Ra-
shevskaya) Tsentral'nogo instituta usovershenstvovaniya vrachey.

CHERNYAYEV, I.I.; MURAVEYSKAYA, G.S.; KORABLINA, I.S.

Reaction of methylamine and ethylenediamine nitrodiamines
of Pt^{II} with HCl. Zhur. neorg. khim. 10 no.8:1950-1951 Ag '65.
(MIRA 19:1)
1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova
AN SSSR. Submitted December 1964.

CHERNYAYEV, I.I.; MURAVEYSKAYA, G.S.; KORABLINA, L.S.

Effects of light on the inner-sphere reactions of Pt(IV)
Halonitrodiammines. Zhur. neorg. khim. 10 no.3:733-735

Mr. '65.

(MIRA 38:7)

CHERNYAYEV, I.I.; MURAVEYSKAYA, G.S.; KORABLINA, L.S.

Effect of hydrochloric acid on nitrodiammines of bivalent
platinum. Zhur. neorg. khim. 10 no.1:300-302 Ja '65.

(MIRA 18:11)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova
AN SSSR. Submitted May 20, 1964.

CHERNYAYEV, I.I.; KORABLINA, L.S.; MURAVEYSKAYA, G.S.

Cleavage and photochemical isomerization of asymmetric platinum (IV)
cis-diamines. Zhur. neorg. khim. 10 no.5:1045-1050 My '65.
(MIRA 18:6)

GUTSALYUK, T.G.; KORABLINA, M.P.; SOKOLOV, M.A.

Dressing oxidized Dzhezkazgan copper ore. Trudy Inst. met. i
obog. AN Kazakh, SSR 6:3-10 '63. (MIRA 16:10)

SOKOLOV, M.A.; SKORMINA, R.A.; KORABLINA, M.P.; BAYSHULAKOV, A.A.

Prospects for the complete treatment of poor molybdenum-tungsten ores
of central Kazakhstan. Trudy Inst. met. i obogashch. AN Kazakh. SSR
2:3-6 '60. (MIRA 13:10)

(Kazakhstan--Nonferrous metals)
(Ore dressing)

GUTSALYUK, T.G.; SOKOLOV, M.A.; KORABLINA, M.P.

Flotation of chrysocolla. Izv. AN Kazakh SSR. Ser. met., obog. i ogneup.
no. 1:3-7 '61. (MIRA 14:6)

(Flotation) (Chrysocolla)

GUTSALYUK, T.G.; KORABLINA, M.P.; SOKOLOV, M.A.

New reagents for the flotation of mixed ores from the Dzhezkazgan
deposit. Trudy Inst. met. i obog. AN Kazakh. SSR 9:3-7 '64.
(MIRA 17:9)

L 15046-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1) IJP(o) BC
ACC NR: AP6002147 SOURCE CODE: UR/0280/65/000/006/0041/0048 63
AUTHOR: Yevseyev, V. F. (Moscow); Korablina, T. D. (Moscow); Rozhkov, S. I. (Moscow)
ORG: none
TITLE: Iteration method of constructing systems with stationary random parameters
SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 6, 1965, 41-48
TOPIC TAGS: automatic control, automatic control system, automatic control theory
ABSTRACT: The selection of optimal parameters of a specified-structure system on the basis of its required output characteristics is considered. The normal system operation is described by a vector formula $\psi(x) \geq 0$, where x is the vector of parameters and ψ is the vector function of constraints. Two engineering problems are considered: (1) Given the distribution function $F(x)$ of a random parameter vector x , find such a vector x_0 that the average deviations of functionals $y_j = \psi_j(x)$ from desirable values c_j be minimal; (2) With incomplete information re $F(x)$ and with a known relation of its normalized dispersions, find maximum tolerances for the

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